

## **R E M A R K S**

In this communication, Claim 1 was amended. No claims were cancelled or added. As such, Claims 1, 3-5, 7, 8, 13-15, 51, and 52 are currently pending. The Examiner's rejections are as follows:

- I) Claims 1, 3-5, 7, 8, 13-15, 51 and 52 were rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement; and
- II) Claims 1, 3-5, 7, 8, 13-15, 51 and 52 under 35 U.S.C. 103(a) as being unpatentable over Arstila et al., Wagner et al., Lebed et al., Kamb et al., Cho et al., and Piechocki et al.

### **I. Written Description Rejection**

The Examiner rejected Claims 1, 3-5, 7, 8, 13-15, 51 and 52 under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement (Office Action, page 3). In particular, the Examiner alleged that the specification did not provide support for the recitation of "the frequency of hybridization in each of said discrete regions." Applicants respectfully disagree with this rejection. Support for this claim limitation is found throughout the specification including, for example, page 3, lines 17-19; page 13, lines 2-5; and page 24, lines 25-27. Regardless, Applicants submit that this rejection is moot as this limitation has been deleted from the claims.

### **II. Obviousness Rejection**

The Examiner rejected Claims 1, 3-5, 7, 8, 13-15, 51 and 52 under 35 U.S.C. 103(a) as being unpatentable over Arstila et al., Wagner et al., Lebed et al., Kamb et al., Cho et al., and Piechocki et al. (Office Action, page 4). Applicants respectfully disagree with this rejection and submit that no motivation, or expectation of success, has been established to combine all the cited references. Nonetheless, in order to further prosecution of the present application, without acquiescing to the Examiner's rejection, while reserving the right to prosecute the original or similar claims in the future, Applicants have amended the claims. In particular, Claim 1 has been amended to recite that the population of lymphocytes are from the subject "after a bone marrow transplantation," and new step e) of "comparing said amount of lymphocyte diversity to said subject's baseline lymphocyte diversity before said bone marrow transplantation." Support for this amendment is found throughout the specification including, for example, page 14, lines

19-29. Applicants respectfully submit that the claims as amended are non-obvious over the cited art. For example, none of the cited art teaches comparing the amount of lymphocyte diversity in the subject (who has had a bone marrow transplantation) to the subject's baseline lymphocyte diversity before the bone marrow transplantation. As such, Applicants submit that the claims as amended be passed to allowance.

## **CONCLUSION**

Should the Examiner believe that a telephone interview would aid in the prosecution of this application, Applicants encourage the Examiner to call the undersigned at 608-662-1277.

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